



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Life Patent Application of

IZUMI et al.

Atty. Ref.: 925-197; Confirmation No.

Appl. No. 09/863,266

TC/A.U. 2871

Filed: May 24, 2001

Examiner: Schechter, Andrew

For: ACTIVE SUBSTRATE WITH PIXEL ELECTRODES MADE OF PHOTSENSITIVE
CONDUCTIVE MATERIAL

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

RULE 131 DECLARATION

We, the inventors of the instant application, hereby declare as follows:

1. We are employed by Sharp Corporation, the assignee of the instant application, and we are listed as inventors of this application.
2. We invented the subject matter of the pending claims prior to March 13, 2000. Also, prior to March 13, 2000, we worked on and helped prepare the "Request for Japanese Patent Application Procedure" that is attached at Exs. 1-2 of the Kangawa declaration previously filed in this case. This "Request for Japanese Patent Application Procedure", dated March 10, 2000, was forwarded to the law firm of Aoyama & Partners on or about March 10-13, 2000. This "Request for Japanese Patent Application Procedure," dated March 10, 2000, is attached hereto

as Exhibit 1. An English translation of this "Request for Japanese Patent Application Procedure," dated March 10, 2000, is attached hereto as Exhibit 2.

3. The first two pages of Exhibit 1, and the first four pages of Exhibit 2, relate to procedural matters. The remainder of Exhibits 1-2 describe the invention claimed in the above-listed patent application which has been assigned Serial No. 09/863,266. For instance, the "Request for Japanese Patent Application Procedure", dated March 10, 2000, includes five drawing figures which correspond to Figs. 1-4 and 7-8 of 09/863,266 (Exs. 1-2).

4. Exs. 1-2 attached hereto and which we the inventors worked on to generate prior to March 10, 2000, the "Request for Japanese Patent Application Procedure" dated March 10, 2000, describe and illustrate an active matrix substrate comprising (referring to the English translation at Ex. 2):

(a) switching elements disposed in a shape of a matrix; gate signal lines controlling the switching elements; source signal lines connected to the switching elements and formed orthogonal to the gate signal lines (e.g., Figs. 1-6, accompanying text, and claim 1 of Ex. 2);

(b) an interlayer insulating film formed over at least the switching elements, the gate signal lines, and the source signal lines; and pixel electrodes formed over at least the interlayer insulating film and in electrical communication with respective switching elements through contact holes defined in the interlayer insulating film (e.g., Figs. 1-6, accompanying text, and claim 1 of Ex. 2);

(c) wherein the pixel electrodes are comprised of a photosensitive conductive material, wherein the photosensitive conductive material of the pixel electrodes has negative type photosensitivity so that only exposed portions thereof remain, and wherein

the gate signals lines and the source signal lines are used as masks during exposure of the negative type photosensitive conductive material of the pixel electrodes from a back side of the substrate so that an array of pixels of the substrate have substantially uniform parasitic capacitance between pixel electrodes and signal lines (e.g., Figs. 1-6, and accompanying text);

(d) wherein the photosensitive conductive material is transparent (e.g., Figs. 1-6, and accompanying text, and claim 2 of Ex. 2); and

(e) wherein the photosensitive conductive material is made from photosensitive resin and conductive particles dispersed in the photosensitive resin. The "Request for Japanese Patent Application Procedure" dated March 10, 2000 also describes that the pixel electrodes are comprised of a photosensitive conductive material including at least one coloring agent so that at least some of the pixel electrodes function as both pixel electrodes and color filters.

5. The respective inventions of claims 19-21 in the Amendment file June 1, 2004 in 09/863,266 are fully supported and described in the "Request for Japanese Patent Application Procedure" dated March 10, 2000 (Exs. 1-2).

6. The invention of the pending claims was diligently worked on from prior to March 10, 2000 until being filed with the Japanese Patent Office on June 2, 2000. For example, the Kangawa declaration filed previously in this case evidences this diligence from March 10, 2000 through June 2, 2000. Additionally, we at Sharp received a draft of the formal patent application from the Aoyama firm on about May 23, 2000. We approved of the draft and sent notice of this back to the Aoyama firm which then filed the application on June 2, 2000 with the Japanese Patent Office, and is identified as JP 2000-165848.

7. In view of the above, the inventions set forth in claims 19-21 of the Amendment filed June 1, 2004 in 09/863,266 were invented prior to May 16, 2000, and diligently worked on from a point in time prior to May 16, 2000 up until the filing of JP 2000-165848 on June 2, 2000, which constructively reduced the inventions to practice.

8. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted,

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